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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/628,711 | 07/28/2003 | Irfan Rahim | 009818-0076-999 | 6759 |
| 48591 | 7590 | 05/18/2006 | EXAMINER | |
| MORGAN, LEWIS & BOCKIUS LLP 1111 PENNSYLVANIA AVENUE WASHINGTON, DC 20004 | | | CHAN, EMILY Y | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2829 | |

DATE MAILED: 05/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PD

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|------------------------------|-------------------------------|------------------------------|--|
| Office Action Summary | Application No. 10/628,711 | Applicant(s) RAHIM ET AL. | |
| | Examiner Emily Y. Chan | Art Unit 2829 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-17 and 20-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-17 and 20-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims status

Claims 1-14, 18-19 and 25-26 are withdrawn. Claims 15-17 and 20-24 are presented for examination.

Claim Objections

1. Claim 21 is objected to because of the following informalities: in the claim, the recitation " the reference structures" lacks antecedent basis. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 15-17 and 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al US Patent No. 6,683,767 in view of Schutz et al US Patent No. 5,440,520.

With respect to claims 15 and 22, Ito et al ('767) disclose a voltage regulator for providing an operating voltage to an integrated circuit (see Figs 1 and 27-28) as claimed, comprising:

a voltage down-converter (150-157) arranged to convert a chip-external supply voltage (V_{ext}) to a converted voltage (V_{int}) based on a signal indicative of a desired

value of the converted voltage and output the converted voltage as the operating voltage; and

an adjustable signal generator (60) for adjustably generating the signal indicative of the desired value of the converted voltage (see Col. 3, lines 23-28).

Ito et al ('767) do not disclose a detector for measuring at least one electrical or operational parameter of the integrated circuit and an evaluator to determine the desired value of the operating voltage based on the parameter(s) measured by the detector.

Schutz et al ('520) disclose an integrated circuit device for selecting its own supply voltage (see Fig. 2) comprising a single semiconductor chip (10) and an on-chip voltage regulator (12). Schutz et al ('520) exclusively teach that the voltage regulator (12) comprises a detector (32) for measuring operational parameter (temperature) of the IC (see Col. 7, 38-44) and an evaluator (34, 38) to determine the desired value of the operating voltage based on the parameter(s) measured by the detector (see Col. 7, lines 46-51 " provides an accurate supply voltage").

Therefore, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to incorporate Schutz et al ('520) 's detector and evaluator into Ito et al ('767) 's voltage regulator for the purpose of providing an operating voltage to a particular device and optimizing the speed of the particular device as disclosed by Schutz et al ('520) (see Col. 7, lines 33-34).

With respect to claims 16 and 23, Ito et al ('767) disclose the voltage regulator (150-157) is an on-chip voltage regulator.

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With respect to claims 17 and 24, Ito et al ('767) disclose that their adjustable signal generator (60, 100) is implemented in a programmable logic device (see Figs. 29-30).

With respect to claim 20, Schutz et al ('520) 's evaluator (34) is implemented in a programmable logic device (see Col. 7, lines 24-25).

With respect to claim 21, Ito et al ('767) 's reference circuit structures are circuit structure of the integrated circuit (See Col. 2, lines 25-27, "third area for laying first internal circuit which operate based on the internal power voltage").

Response to Arguments

Applicant's arguments with respect to claims 15-17 and 20-24 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

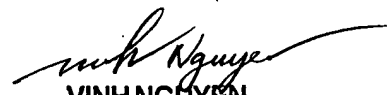
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emily Y. Chan whose telephone number is 571-272-1956. The examiner can normally be reached on 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on 571-272-1705. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EC
5/11/06


VINH NGUYEN
PRIMARY EXAMINER
A.U. 2829
05/15/06